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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/674,077	10/26/2000	Hideyuki Kimura	107714	1563
25944	7590	10/01/2004	EXAMINER	
OLIFF & BERRIDGE, PLC			PATTERSON, MARC A	
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ALEXANDRIA, VA 22320			PAPER NUMBER	

1772

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/674,077	Applicant(s) KIMURA ET AL.	
	Examiner Marc A Patterson	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 12-14 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 12-14 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

NEW REJECTIONS

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 2 and 21 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (Japanese Patent No. 6246777).

With regard to Claims 1 and 21, Suzuki et al disclose a cylindrical body (therefore having an inner surface and barrel portion having an outer surface; paragraph 0018, English translation; Figure 2) and a sheet – shaped insert having an upper end (blank plate; paragraph 0018, English translation; Figures 2 and 3) wherein the insert is bonded to the outer surface of the barrel portion (paragraph 0018, English translation; Figure 2), and therefore has an inner face bonded to the barrel portion and an outer face opposite the inner face; the body is made by a process in which a core (paragraph 0012, English translation) is inserted into a mold (retainer plate of a split mold; paragraph 0012, English translation) to form a cavity in between through which thermoplastic is injected (paragraph 0012, English translation). Suzuki et al fail to disclose a body having a mark which is made by an injection gate opening, positioned at its inner surface, while being inwardly apart from the upper end of the insert in an axial direction and at a position corresponding to a position on the inner surface that is covered by the insert. However, Suzuki et al disclose injecting the resin through two or more runners which are drilled in the upper part of

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the core (paragraph 0011, English translation; the runners are numbered '32' in Figure 2), for the purpose of connecting the injection gate with the cavity (paragraph 0011, English translation).

Therefore, one of ordinary skill in the art would have recognized the utility of providing for additional runners, which connect the injection gate with the cavity at different locations along the cavity, depending on the desired number of connection points, as taught by Suzuki et al.

Because the insert is located in the cavity (paragraph 0026, English translation), one of ordinary skill in the art would therefore recognize the utility of providing for additional runners which connect the injection gate with the cavity at locations which include locations which are covered by the insert, and are at positions inwardly apart from the upper end of the insert, depending on the desired number of connection points between the injection gate and the cavity and the locations of the connection points as taught by Suzuki et al, thus producing marks of the injection gate at those positions, because the presence of resin at those positions marks the presence of the injection of the resin.

With regard to Claim 2, the cylindrical article further comprises a gap on the outer surface positioned between opposed ends of the insert and not covered by the insert (the edges of the insert; (paragraph 0018, English translation; Figure 2).

With regard to newly submitted Claim 22, as stated with regard to Claim 1 above, Suzuki et al disclose injecting the resin through two or more runners which are drilled in the upper part of the core (paragraph 0011, English translation; the runners are numbered '32' in Figure 2), for the purpose of connecting the injection gate with the cavity (paragraph 0011, English translation). Therefore, one of ordinary skill in the art would have recognized the utility of providing for runners which connect the injection gate with the cavity at different locations along

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the cavity, depending on the desired number of connection points, as taught by Suzuki et al. Because the insert is located in the cavity (paragraph 0026, English translation), one of ordinary skill in the art would therefore recognize the utility of providing for additional runners which connect the injection gate with the cavity at locations which include locations which are covered by the insert, and are at positions inwardly apart from the upper end of the insert, and are in an upper part of the core, depending on the desired number of connection points between the injection gate and the cavity and the locations of the connection points as taught by Suzuki et al, thus producing marks of the injection gate at those positions, because the presence of resin at those positions marks the presence of the injection of the resin.

3. Claims 3 – 6, 12 – 14 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (Japanese Patent No. 6246777) in view of Asasi Chemical (Japanese Patent No. 03286815).

With regard to Claim 3, Suzuki et al disclose a cylindrical body having an inner surface, a barrel portion having an outer surface an insert having an upper end and a gap between the two edges of the insert as discussed above. Suzuki et al also disclose a method for making an insertion – molded cylindrical article using an injection molding mold (paragraph 0005, English translation) which comprises a core (paragraph 0012, English translation) which is inserted into a mold (retainer plate of a split mold; paragraph 0012, English translation) to form a cavity in between through which thermoplastic is injected (paragraph 0012, English translation); the injection mold is therefore an insertion injection molding mold. The mold comprises an outer mold unit (split molds which are held in a retainer plate; paragraph 0012, English translation)

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which defines a core inserting space (a core is inserted into the space between the split molds in the retainer plate; paragraph 0012; Figure 7), and the core which is inserted into the space has an injection gate opening (runner; paragraph 0012, English translation) and is pulled out of the space to fabricate the container (paragraph 0025, English translation); the outer mold unit therefore has an inner surface and a pull – out mold unit and defines a core – inserting space therein, a core having an injection gate opening and shaped to be inserted and fitted into the outer molding unit; a molding cavity is defined between the outer mold unit and the core (cavity; paragraph 0025, English translation); the method comprises fitting, attaching and holding the insert along the inner surface of the outer molding unit (the insert is welded to the thermoplastics which constitutes the pillar section, and is therefore fitted into the pillar section; paragraph 0018, English translation), injecting a molten resin through the injection gate opening (thermoplastics are injected through the runner; paragraph 0018, English translation) toward the molded body inner surface (the molded body is formed by the injection of the thermoplastic through the runner, therefore the inner surface of the container is also formed; paragraph 0018, English translation) the insert is located in the cavity between the core and outer mold (paragraph 0026, English translation) and is therefore pushed onto the inner surface of the outer molding unit the insert is integrally bonded to the outer surface of the barrel portion of the cylindrical body (paragraph 0018, English translation; Figure 2).

Suzuki et al fail to disclose injecting the resin at a position inwardly apart from the upper end of the insert and at a position on the molded body inner surface that is covered by the insert. However, Suzuki et al disclose injecting the resin through two or more runners which are drilled in an upper part of the core (paragraph 0011, English translation; Figure 2), for the purpose of

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connecting the injection gate with the cavity (paragraph 0011, English translation). Therefore, one of ordinary skill in the art would have recognized the utility of providing for additional runners, which connect the injection gate with the cavity at different locations along the cavity, depending on the desired number of connection points, as taught by Suzuki et al. Because the insert is located in the cavity (paragraph 0026, English translation), one of ordinary skill in the art would therefore recognize the utility of providing for additional runners which connect the injection gate with the cavity at locations which include locations which are covered by the insert, and are at positions inwardly apart from the upper end of the insert, depending on the desired number of connection points between the injection gate and the cavity and the locations of the connection points as taught by Suzuki et al.

It therefore would have been obvious for one of ordinary skill in the art to inject the resin at a position inwardly apart from the upper end of the insert and at a position on the molded body inner surface that is covered by the insert, depending on the desired number of connection points between the injection gate and the cavity and the locations of the connection points as taught by Suzuki et al.

Suzuki et al also fail to disclose curing the molten resin.

Asahi Chemical teaches that thermoplastic resins and thermosetting resins are used alternatively in the making of containers for the purpose of making a container having a good appearance (English Abstract). Therefore, one of ordinary skill in the art would have recognized the utility of providing for the thermosetting resin taught by Asahi Chemical, rather than a thermoplastic resin, in Suzuki et al, which is a container, depending on the desired surface appearance of the end product as taught by Asahi Chemical.

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It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a thermosetting resin in Suzuki et al in order to make a container having a good appearance as taught by Asahi Chemical, thus providing for a resin which continuously throughout the molding process of Suzuki et al including the step following injection of the resin.

With regard to Claim 4, Suzuki et al do not disclose the injecting the resin towards the gap; the claimed aspect of the resin not being injected towards the gap therefore reads on Suzuki et al.

With regard to Claims 5 and 12, a knock out pin is provided in the core disclosed by Suzuki et al (ejection pin; paragraph 0011, English translation), and the method further comprises pulling out the pull – out mold unit of the outer mold unit after the insertion molding (paragraph 0025, English translation) and cutting a connection between the cured resin inside the injection gate opening and cylindrical body by raising the knock – out pin (the ejection pin is raised, eliminating thermoplastics remaining between the core and runner, thus cutting the connection between molded body and the knock – out pin; paragraph 0011, English translation) and removing the cylindrical article by pushing the bottom portion of the cylindrical molded body (the fabricated compound container is taken out from the core by moving upwards the stripper plate with which its bottom portion is in contact (paragraph 0022; English translation; Figure 9).

With regard to Claims 6 and 13 – 14, as discussed above the insert disclosed by Suzuki et al is fitted, attached and held in a cylindrical shape along the inner surface of the outer mold unit; the mold unit is a pull – out mold unit as discussed above, and the a contact frictional force is

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therefore applied by placing the insert in a cylindrical shape into the outer mold unit while the core of the injection molding mold is pulled out from the outer mold unit.

With regard to newly submitted Claim 23, as stated with regard to Claim 22 above, Suzuki et al disclose injecting the resin through two or more runners which are drilled in the upper part of the core (paragraph 0011, English translation; the runners are numbered '32' in Figure 2), for the purpose of connecting the injection gate with the cavity (paragraph 0011, English translation). Therefore, one of ordinary skill in the art would have recognized the utility of providing for runners which connect the injection gate with the cavity at different locations along the cavity, depending on the desired number of connection points, as taught by Suzuki et al. Because the insert is located in the cavity (paragraph 0026, English translation), one of ordinary skill in the art would therefore recognize the utility of providing for additional runners which connect the injection gate with the cavity at locations which include locations which are covered by the insert, and are at positions inwardly apart from the upper end of the insert, and are in an upper part of the core, depending on the desired number of connection points between the injection gate and the cavity and the locations of the connection points as taught by Suzuki et al, thus producing marks of the injection gate at those positions, because the presence of resin at those positions marks the presence of the injection of the resin.

It therefore would have been obvious for one of ordinary skill in the art to inject the resin at a position inwardly apart from the upper end of the insert and at a position on the molded body inner surface that is covered by the insert, depending on the desired number of connection points between the injection gate and the cavity and the locations of the connection points as taught by Suzuki et al.

ANSWERS TO APPLICANT'S ARGUMENTS

4. Applicant arguments regarding the 35 U.S.C. 103(a) rejection of Claims 1 – 2 and 21 as being unpatentable over Suzuki et al (Japanese Patent No. 6246777) and 35 U.S.C. 103(a) of Claims 3 – 6 and 12 – 14 as being unpatentable over Suzuki et al (Japanese Patent No. 6246777) in view of Asahi Chemical (Japanese Patent No. 03286815) of record in the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

I. 103 Rejections Over Suzuki

Applicant argues, on page 7 of the remarks dated July 24, 2004, that the previous Action misquotes Suzuki et al, by stating that the disclosed runners are located in the core, when in fact the runners are located in the upper part of the core, as disclosed by Suzuki et al.

However, the runners are clearly located in the core, as they are located in the upper part of the core.

Applicant also argues on page 7 that Suzuki et al never disclose gate marks of of the molded article that are inwardly apart from the upper end of the insert or on the inner surface that is covered by the insert.

However, as stated on page 3 of the previous Action, Suzuki et al disclose injecting the resin through two or more runners which are drilled in the core (paragraph 0011, English translation; the runners are numbered '32' in Figure 2), for the purpose of connecting the injection gate with the cavity (paragraph 0011, English translation). Therefore, one of ordinary skill in the art would have recognized the utility of providing for additional runners, which connect the injection gate with the cavity at different locations along the cavity, depending on the

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desired number of connection points, as taught by Suzuki et al. Because the insert is located in the cavity (paragraph 0026, English translation), one of ordinary skill in the art would therefore recognize the utility of providing for additional runners which connect the injection gate with the cavity at locations which include locations which are covered by the insert, and are at positions inwardly apart from the upper end of the insert, depending on the desired number of connection points between the injection gate and the cavity and the locations of the connection points as taught by Suzuki et al.

Applicant also argues, on page 8, that Claims 2 and 21 depend from Claim 1 and therefore are patentable over Suzuki et al for the same reasons as those stated with regard to Claim 1. In response, the answers above are repeated.

II. 103 Rejection Over Suzuki in view of Asahi Chemical

Applicant also argues on page 8 that Suzuki et al does not teach the claimed invention, and Suzuki et al in view of Asahi would therefore not render the claimed invention obvious.

However, as stated above, the claimed invention is obvious over Suzuki et al because Suzuki et al disclose injecting the resin through two or more runners which are drilled in the core (paragraph 0011, English translation; the runners are numbered '32' in Figure 2), for the purpose of connecting the injection gate with the cavity (paragraph 0011, English translation). Therefore, one of ordinary skill in the art would have recognized the utility of providing for additional runners, which connect the injection gate with the cavity at different locations along the cavity, depending on the desired number of connection points, as taught by Suzuki et al. Because the insert is located in the cavity (paragraph 0026, English translation), one of ordinary skill in the art would therefore recognize the utility of providing for additional runners which connect the

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injection gate with the cavity at locations which include locations which are covered by the insert, and are at positions inwardly apart from the upper end of the insert, depending on the desired number of connection points between the injection gate and the cavity and the locations of the connection points as taught by Suzuki et al.

Applicant also argues, on page 9, that Asahi does not cure the deficiencies of Suzuki et al because Asahi does not teach gate marks of the molded article that are inwardly apart from the upper end of the insert or on the inner surface that is covered by the insert. However, as stated on page 6 of the previous Action, Asahi Chemical teaches that thermoplastic resins and thermosetting resins are used alternatively in the making of containers for the purpose of making a container having a good appearance (English Abstract). Therefore, one of ordinary skill in the art would have recognized the utility of providing for the thermosetting resin taught by Asahi Chemical, rather than a thermoplastic resin, in Suzuki et al, which is a container, depending on the desired surface appearance of the end product as taught by Asahi Chemical.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a thermosetting resin in Suzuki et al in order to make a container having a good appearance as taught by Asahi Chemical, thus providing for a resin which continuously throughout the molding process of Suzuki et al including the step following injection of the resin.

III. 112 Second Paragraph Rejections

The 35 U.S.C. second paragraph rejections of Claims 6 and 13-14 of record in the previous Action, have been rendered moot by Applicant deletion of those limitations from the claims.

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5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

Marc Patterson
Art Unit 1772

Harold Pyon
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

9/28/04